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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,133	10/26/2005	Gerrit H. Verwoerd	VERWOERD 1 PCT	1283
25889	7590	12/22/2008		
COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			EXAMINER LEE, GILBERT Y	
			ART UNIT	PAPER NUMBER
			3673	
			MAIL DATE	DELIVERY MODE
			12/22/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/550,133	<b>Applicant(s)</b> VERWOERD, GERRIT H.	
	<b>Examiner</b> GILBERT Y. LEE	<b>Art Unit</b> 3673	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/5/08 has been entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 8-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amendment to claim 8 recites "an underside". The orientation of the combination has not previously been disclosed in the current application. It seems that the applicant has taken the structure shown in Figs. 1c and 4a-4c to amend claim 8; however, Fig. 1a clearly shows the combination being annular.

Claims 9-13 are rejected for depending on a rejected claim.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 8-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The amendment to claim 8 recites "an underside". It is unclear to the examiner as to where the underside of the lug is located since Fig. 1a clearly shows the combination being annular.

Claims 9-13 are rejected for depending on a rejected claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8-13, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bosch (FR Patent No. 1,391,410) in view of Reid (US Patent No. 2,859,061) and Benware (US Patent No. 3,642,248).

Regarding claim 8, the Bosch reference, as best understood discloses a combination valve (Page 2, Lines 70-83), piston (2), cylinder (1) and annular gap seal

(Fig. 4), said annular gap seal blocking a flow of fluid from a high-pressure side to a low-pressure side of the valve in a blocked position (Page 2, Lines 70-83), the valve having the cylinder which the fluid may flow through and in which the piston is axially displaceable (Fig. 4), and an annular gap (e.g. gap between 1 and 2) between the piston and the cylinder (Fig. 4) being sealable in the blocked position using the annular gap seal (Fig. 4), which lies in a peripheral groove (Fig. 4), two sealing rings (23 and 24) positioned mirror-symmetrically (Fig. 4) and a sealing surface (A) of a first sealing ring (Fig. 4),

a sealing shoulder (B) of the first sealing ring (Fig. 4), and a sealing lip (C). Note that the seal of the Bosch reference is **capable of** blocking flow of a fluid (Page 2, Lines 70-83).

However, the Bosch reference fails to explicitly disclose the groove being in the cylinder; a peripheral lug on both sides, projecting into the groove; and the lug having an underside that is upwardly inclined from a wall of the groove toward the middle plane of the groove.

The Reid reference, a seal used with a piston, discloses making the groove in the piston or the cylinder (Figs. 17 and 22).

It would have been obvious to one of ordinary skill in the art at the time of the invention to place the groove in the cylinder instead of the piston in the Bosch reference in view of the teachings of the Reid reference as a matter of mechanical expedience and to reduce manufacturing costs.

The Benware reference, a sealing mechanism, discloses providing peripheral lugs (e.g. including 145, 147, 149 and 146, 148, 150) that project toward a middle plane of the groove (Fig. 6) to the groove, the lug having an underside that is upwardly inclined from a wall of the groove toward the middle plane of the groove (Fig. 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide peripheral lugs to the Bosch reference in view of the teachings of the Benware reference in order to lock the seal in the groove (Abstract).

Regarding claim 9, the Bosch reference, as modified in claim 8, discloses the sealing rings having a C-profile (Fig. 4).

Regarding claim 10, the Bosch reference, as modified in claim 8, discloses the annular gap seal (Fig. 4). Note that the annular seal of the Bosch reference is **capable of** being pretensioned.

Regarding claim 11, the Bosch reference, as modified in claim 8, discloses a stabilizing element (17) which may be laid in the direction of the groove with the sealing rings (Fig. 4).

Regarding claim 12, the Bosch reference, as modified in claim 8, discloses the stabilizing element being a coiled spring (Fig. 4). Note that the spring of the Bosch reference is **capable of** being inserted in a torus shape.

Regarding claim 13, the Bosch reference, as modified in claim 11, discloses the annular gap seal (Fig. 4). Note that the annular seal of the Bosch reference is **capable of** being pre-tensioned using the stabilizing element.

***Response to Arguments***

5. Applicant's arguments with respect to claim 8 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GILBERT Y. LEE whose telephone number is (571)272-5894. The examiner can normally be reached on 8:00 - 4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia L. Engle can be reached on (571)272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patricia L Engle/  
Supervisory Patent Examiner,  
Art Unit 3673

/G. Y. L./  
Examiner, Art Unit 3673

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